

**ENVIRONMENTAL ASSESSMENT
KONGIGANAK TELECOMMUNICATIONS TOWER SITE
KONGIGANAK, ALASKA**

For

UNITED UTILITIES, INC.

Presented By

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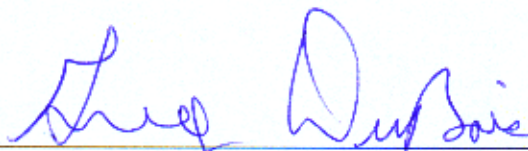
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Acronyms and Abbreviations

ADNR	Alaska Department of Natural Resources
AHRS	Alaska Heritage Resources Survey
BSI	Bethel Services, Inc.
CFR	Code of Federal Regulations
EA	Environmental Assessment
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
SHPO	State Historic Preservation Officer
TBM	Temporary Bench Mark
USF&WS	United States Fish & Wildlife Service
UUI	United Utilities, Inc.

1.0 Introduction

Bethel Services, Inc. (BSI) completed this Environmental Assessment (EA) for United Utilities, Inc. (UII) for the proposed installation of a 235 foot communications tower to be situated in Kongiganak, Alaska. The tower is planned to be part of a telecommunications network in the Yukon Kuskokwim Delta region. The proposed network is to provide broadband internet services and telemedicine services to the villages served by the network. Bethel is the proposed hub of the network with towers in outlying communities transmitting and receiving signals from Bethel. Figure 1 in Appendix A – Figures shows the location of Kongiganak and Figure 2 depicts the project site location within Kongiganak. The objective of the EA was to determine if construction and use of the proposed tower will have a significant environmental impact.

This EA was conducted in accordance with Code of Federal Regulations (CFR) Title 47, Volume 1 Section 1.1307 which specifically regulates activities within the jurisdiction of the Federal Communications Commission (FCC).

There are eight actions that may require an EA under these regulations:

1. Facilities that are to be located in an officially designated wilderness area;
2. Facilities that are to be located in an officially designated wildlife preserve;
3. Facilities that may affect listed threatened or endangered species or designated critical habitats or are likely to jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973;
4. Facilities that may affect districts, sites, buildings, structures or objects, significant in American History, architecture, archaeology, engineering or culture, that are listed, or are eligible for listing in the National Register of Historic Places;
5. Facilities that may affect Indian religious sites;
6. Facilities to be located in a flood plain;
7. Facilities whose construction will involve significant change in surface features (e.g. wetlands fill, deforestation or water diversion); and

8. Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning laws. In addition, commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an EA if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in Sections 1.130 and 2.1093 of Chapter I.

The proposed site is assumed to be a wetland thereby requiring an EA.

1.1 Community Information

Kongiganak is located in western Alaska near the mouth of the Kongignanohk River near the west shore of Kuskokwim Bay, and west of the mouth of the Kuskokwim River. It lies 70 miles southwest of Bethel and 451 miles west of Anchorage, Alaska. The village is at approximately latitude 59.88° North and longitude 163.054° West in Section 33, Township 0002S, Range 079W, Seward Meridian. It is located in the United States Geological Survey (USGS) Kuskokwim D-3 map. Kongiganak is in the Bethel recording district and encompasses 1.7 square miles of land and 0.2 square miles of water.

The following information was summarized from the Alaska Department of Community and Economic Development:

The area has been occupied historically by Yup'ik Eskimos. The village was permanently settled in the late 1960s by former residents of Kwigillingok.

A federally recognized tribe is located in the community -- the Native Village of Kongiganak. 97.2% of the population is Alaska Native or part Native.

Kongiganak is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle and culture. The sale, importation or possession of alcohol is banned in the village. During the 2000 U.S. Census, there were 90 total housing units, and 11 were vacant. 1 of these vacant housing units are used only seasonally. 138 residents were employed. The unemployment rate at that time was 3.5%, although 48.31% of all adults were not in the work force. The median household income was \$33,250, per capita income was \$9,881, and 13.77% of residents were living below the poverty level. Approximately half of the employment in Kongiganak is at the school. The remaining employment is with village services, stores, and

commercial fishing. 28 residents hold commercial fishing permits. Poor returns and reduced salmon prices in recent years have affected the economy. Subsistence activities are important supplements to income. Some trapping occurs.

A State-owned 1,885' long by 35' wide gravel airstrip is available. Snowmobiles, boats and skiffs provide local transportation to Bethel and other area villages. Winter trails exist to Kwigillingok (11.1 mi.) and Tuntutuliak (29 mi.) There are no docking facilities; barges deliver cargo once or twice each summer.

2.0 Site Information

The site location is approximately one mile northeast from the Kongiganak airstrip. The land is currently undeveloped, however, there is a boardwalk that leads up to the site and beyond to a water pump that supplies fresh water for the village. The leased lot is 20,000 square feet or 0.46 acres in area. The proposed area of the gravel pad is 9,023 square feet or 0.21 acres. Based on topographic maps, the elevation of the site is approximately 30 feet. The base flood elevation in this area has been calculated to be 20.7 feet above mean low low water. The site is generally level and is located in a permafrost area. Photographs of the site appear in Appendix B.

2.1 Current and Historic Uses

The site is owned by Qemirtalek Coast Corporation, which is the village native corporation. The site is currently not occupied. There are no known historical uses of the site.

2.2 Neighboring Properties

The land adjacent to the site is also vacant and is also owned by Qemirtalek Coast Corporation.

2.3 Zoning

The site is not zoned.

2.4 Community Issues and Site Selection

The Kongiganak village native corporation is called Qemirtalek Coast Corporation and the village council is called Native Village of Kongiganak. Both the village corporation and the council have been consulted regarding the construction of the tower and no objections were received regarding the planned location. A copy of a letter dated February 18, 2004 from UUI to Qemirtalek Coast Corporation with a “cc” to the Kongiganak Traditional council, advising them of the planned construction of the tower, is attached in Appendix D. In response to this letter, UUI worked with Mr. William Igkurak, Chairman of the Board for Qemirtalek Coast Corporation to obtain their agreement to the proposed site and a lease was executed with the corporation on July 15, 2004.

2.5 Construction Plans

Construction plans are provided in Appendix C. Those plans include placement of a gravel pad, a communications building, and a tower. The total planned area of the pad is 9,023 square feet or 0.21 acres. The pad will have a 12 inch sand base placed on the native vegetation, followed by a 6-inch blue board insulating layer, topped by an 8 inch layer of gravel. The building will be

fiberglass and wood construction on a steel skid, 10 feet wide by 24 feet in length (inside dimensions), and placed on top of driven steel pilings. The pilings will be driven approximately 35 feet below grade.

The tower will have 3 legs. Each leg will have the support of 4 pilings. Each piling will be placed to a depth of approximately 58 feet below existing grade. Next to each piling a thermistor will be installed to monitor freeze back and pile performance. The height of the tower above the ground surface is planned to be 235 feet. The tower will be self supporting without guy wires.

The building and tower pad will be secured with a 6 foot high chain link fence with barbed wire, and the enclosed area will be locked to prevent public access.

3.0 Compliance Review

BSI completed this EA in accordance with 47 CFR 1.1307. In this section we are presenting our findings in the order described in the regulations.

- 1. Officially Designated Wilderness Areas** – The site is located within the village of Kongiganak on land which is privately owned by Qemirtalek Coast Corporation (as shown in Appendix A- Figures 1 and 2), and therefore is not in a designated Wilderness Area. In addition, the United States Fish & Wildlife Service (USF&WS) Yukon Delta National Wildlife Refuge and Wilderness Area map (Appendix A-Figure 3) includes locations of wilderness areas in the region, and shows that there are no designated wilderness areas in this vicinity.
- 2. Officially Designated Wildlife Preserve** – The site is located within the village of Kongiganak and as previously stated and shown, the land is privately owned by Qemirtalek Coast Corporation, and therefore is not in a wildlife preserve. Based on a review of the USF&WS Yukon Delta National Wildlife Refuge and Wilderness Area map (Appendix A-Figure 3), it is confirmed that the area within the village of Kongiganak is not part of the Yukon Delta National Wildlife Preserve.
- 3. Listed/Endangered Species** – On August 2, 2004 UUI requested concurrence from the USF&WS that the installation of the proposed tower in Kongiganak would have no effect on threatened or endangered species or their critical habitat. On August 2, 2004 Ms. Ellen Lance, an Endangered Species Biologist with the USF&WS indicated that USF&WS had concerns regarding the tower at Kongiganak due to the fact that the village is located adjacent to Steller's eider critical habitat and within spectacled eider breeding habitat. The USF&WS was concerned about possible construction activities during the breeding season from April 1 through July 1, and the visibility of the tower to the birds. USF&WS also queried whether the tower site would be fenced and requested more information regarding the proposed power line to the site. On August 9, 2004 UUI discussed the project in detail with Ms. Lance and responded to all of the USF&WS concerns in writing on August 10, 2004. A copy of UUI's letter is attached in Appendix D. In order to increase visibility, UUI will place bird deterrent tape on the sections of the tower that stand between 20 to 40 feet in height and will ensure that this tape is

maintained in good condition during April 1 through October 1 each year. Predator proof fencing will be installed around the perimeter of the tower to monitor for bird strikes on the tower. UUI will limit ground work to times outside of the breeding season to eliminate potential disturbance to the eider's during that critical time. UUI will also install guy guards on the power line pole guy wires and will assist the local utility in the purchase and installation of bird deterrent devices to be hung on the power lines to reduce the risk of bird strikes on the wires. On August 12, 2004 the USF&WS responded to UUI's letter and concurred with UUI's determination that the tower and the power line in Kongiganak are not likely to adversely affect threatened Steller's or spectacled eiders or their critical habitat because of the measures that UUI has built into the project to reduce risk to eiders. A copy of the USF&WS concurrence letter is attached in Appendix D.

4&5. Historical Properties/Cultural Resources and Native Religious Sites–

On June 23, 2004, The State Historic Preservation Officer (SHPO) issued a letter to UUI indicating a finding of No Historic Properties Affected for several project locations including Kongiganak. A copy of that letter is presented in Appendix D.

- 6. Floodplains** – Alaska has a short history of recorded flood events. Most rural villages in the Yukon-Kuskokwim Delta region of Alaska, including the community of Kongiganak, do not participate in the National Flood Insurance Program (NFIP). The information available about flood-prone areas in Alaska is limited and the recommended building elevations (RBE) are approximations. In most instances, no detailed maps defining the floodplains are available for the project area. In determining whether or not a proposed tower will be located in a floodplain, UUI considered the flood hazard data available on the US Army Corps of Engineers (USACE) Floodplain Management Services web pages. This is the best available data from any Federal, State or local source. Please find attached a copy of the Flood Hazard Data for Kongiganak obtained from the COE website in Appendix D. According to the USACE Flood Hazard Data for Kongiganak, the 100-year flood or Base Flood Elevation has been calculated to be 20.7 ft MLLW. Most of the village is located at 30 feet MLLW. Review of a topographic map (attached as Figure 4 in Appendix A) indicates that the proposed tower site is at approximately the same elevation as the village or approximately 30 feet. There is no indication that the proposed site is located in a floodplain.
- 7. Surface Features** – The National Wetlands Inventory Maps were reviewed but the Kongiganak area has not been inventoried and/or included in the map of Alaska (attached

Appendix D). UUI mailed a July 27, 2004, letter to Ms. Mary Leykom with the USACE in Anchorage, Alaska, indicating that it is assumed that the Kongiganak site is in a wetland and requested that the USACE approve use of Nationwide Permit (NWP) #12 at Kongiganak since the proposed filled area is 0.21 acres. Ms. Leykom approved use of NWP #12 in a letter dated August 19, 2004. Copies of the application and the approval are presented in Appendix D.

- 8. Tower Lighting and Radio Frequency** – High intensity white lights will not be used on the proposed Kongiganak tower. The FAA issued a February 13, 2004 “Determination of No Hazard to Air Navigation” letter, indicating that lighting will not be required (Appendix C). However, UUI plans to light the tower in accordance with FAA regulations including FAA Advisory Circular 70/7460-1 AC 70/7460-1K, Obstruction Marking and Lighting, a med-dual system – Chapter 4,8 (M-Dual), and 12.

Mr. Alex Leavens of UUI reviewed FCC Bulletin 65: “Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields” Appendix A, Table 2. He indicated that a radio frequency evaluation was not required because the antennas on the tower will not be located less than 10 meters (32.8 feet) above ground level, and, the power output at the site will be less than 10 kilowatts equivalent radiated power (ERP) power in the direction of the emissions. As the tower will be a 235 foot, self supporting tower, and no antennas will be located less than 10 meters above the ground and the power signal will be low, excess radiation exposure does not appear to be an environmental concern at this site. In addition, the site will be fenced to prevent access to the operations building or the tower itself.

4.0 *Conclusions and Recommendations*

BSI recommends a Finding of No Significant Impact (FONSI) based on the results of this EA. Although the site is located within a wetland, the USACE has approved the site to be filled under the Nationwide Permit #12 in a manner that will not have significant impact on the environment. The USF&WS also concurred that the installation of the tower is not likely to adversely affect threatened Steller's or spectacled eiders or their critical habitat because measures have been built into this project to reduce the risk to eiders. Based on this information, the preparation of a FONSI order is recommended to allow the development of this site without further environmental analysis.

The benefits to the local community in Kongiganak to have improved communications through this telemedicine network in this remote section of Alaska cannot be over stated.

5.0 *References and Information Sources*

Federal Communications Commission 47 CFR, Chapter 1.1301-1.1319

Federal Aviation Administration

US Fish and Wildlife Service, Alaska

Alaska Department of Natural Resources

Alaska Historic Register Survey

Federal Emergency Management Agency information at web site:

http://www.poa.usace.army.mil/en/cw/fld_haz/bethel.htm

United Utilities, Inc.

Alaska Department of Community and Economic Development at web site:

<http://www.dced.state.ak.us/dca/commdb/CIS.cfm>

Limitations

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